Inverter

Communication protocol

Ver：1.01

Summary

This file describes the inverter communication protocol. This protocol complies with the standard Modbus RTU protocol. The default device address is 0x01.

Hardware resources

Baud rate	Automatic recognition
Data length	8 bits
Stop bit	1 bit
Check	None

Automatic baud rate

The device's baud rate recognition range is: 2400Bps-28800Bps (default: 9600Bps)

Recognition principle: Every time the device is turned on, the last saved baud rate is read, and the baud rate at this time is unlocked. Device will detect the data of the communication port during identification, calculate the baud rate based on the data, and configure the baud rate of the device to prepare for the next data reception, lock the baud rate when the correct data is received, and save the baud rate identified this time It can be used directly when the machine is turned on next time, and then turn off the automatic baud rate.

Note: The condition for correctly identifying the baud rate is that the wiring must be correct, the device address must be correct, and the verification data must be correct setting.

RS232 port connection RS485 port connection computer inverter computer inverter

Register map, read function, code 0x03

Address	Data	Description
0x0000	DC input voltage	Real value=read value/100
0x0001	AC input voltage	
0x0002	AC input frequency	
0x0003	AC output frequency	
0x0004	AC output voltage	
0x0005	AC output current	
0x0006	Temperature	Reserved
0x0007	Device MODBUS address	Real value=read value/100
0x0008	Firmware version	
0x0009	Status informantion_1 In bit info, 1 for abnormal, 0 for normal	Bit0: input abnormal Bit1:Input over voltage Bit2: Input lower voltage Bit3: AC input abnormal Bit4: AC input over voltage Bit5: AC input lower voltage Bit6, Bit7, Bit8: Reserved Bit9: Overload Bit10: Inverter abnormal Bit11: Working info (1 for AC, 2 for DC) Bit12: Machine status (1 for OFF, 2 for Opened) Bit13: Output short circuit Bit14, Bit15 : Reserved
0x000A	Status informantion_2	Reserved

Register map, Write function, code 0x06

Address	Data	Description
0x0060	Working mode	0000:AC priority FF00:DC priority
0x0061	Remote ON/OFF	0000: Open machine FF00: OFF machine

Example:

Read DC input voltage

Host send command

01 03 00 00 00 01 CRC

Machine response

01 03 02 12 E0 CRC

DC voltage = 0x12E0=4832/100=48.32V

Set remote turn OFF the inverter

Host send command

01 06 00 60 FF 00 CRC

Machine response

01 06 00 60 FF 00 CRC

Notes: this function need open the machine main power switch